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| **Lecturer’s Name:** Ruth Lennon |
| **Assessment Title:** CA2 |
| **Work to be submitted to:** LYIT |
| **Date for submission of work:** 08/12/2021 at 23:59 |
| **Place and time for submitting work:** Blackboard & GitHub |

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| To be completed by the Student |
| **Student’s Name:** Gonzalo Roo Ponce |
| **Class:** BSc in Data Centre Management |
| **Subject/Module:** OO Programming for Server Admin |
| **Word Count (where applicable):** N/A |
| **I confirm that the work submitted has been produced solely through my own efforts.**  **Student’s signature: Date:**  08/12/2021 |

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| **Notes**  **Penalties:** The total marks available for an assessment is reduced by 15% for work submitted up to one week late. The total marks available are reduced by 30% for work up to two weeks late. Assessment work received more than two weeks late will receive a mark of zero.  **Continuous Assessment:** For students repeating an examination, marks awarded for continuous assessment shall normally be carried forward from the original examination to the repeat examination.  **Declaration:**  I declare that this work is entirely my own and does not contain the words or ideas of someone else, whether published or not, without specific acknowledgement by relevant referencing. I have read and understood the LYIT Plagiarism Policy on the “Student & Academic Policies” section of the LYIT Website and understand plagiarism to include:  Direct copying of text, images and other materials (electronic or otherwise) from a book, article, fellow student’s essay, handout, web page or other source without proper acknowledgement.  Claiming individual ideas derived from a book, article etc. as one’s own and incorporating them into one’s work without acknowledging the source of these ideas.  Overly depending on the work of one or more other sources without proper acknowledgement of the source, by constructing an essay, project etc., extracting large sections of text from another source and merely linking these together with a few of one’s own sentences.  I understand that it is my responsibility to familiarise myself with and to follow the Institute’s Assessment Regulations. I acknowledge that Incidents of alleged plagiarism and cheating are dealt with in accordance with the Institute’s Assessment Regulations and that penalties will be applied if I breach this policy. | |
| **Signed:** | **Date:**  08/12/2021 |

# Q1 to Q6 – GitHub Repository

The GitHub repository used to answer the assignment questions can be found in the link below:

<https://github.com/grooponce/L00162290_Assignments_OOProg>

# Q7 – Conclusion

During the last 12 weeks where the OO Programming for Server Admin class took place, I have discovered a completely new perspective about server management, how programming languages can help in this task and how many valuable and complementing tools are available in this field. In my professional experience in the field, I had a relatively good grasp of Linux server administration and troubleshooting, but my lack of scripting was evidently shown at the beginning of the course. Through the weeks, during lectures and labs, I was able to understand the building blocks of creating healthy and scalable scripts, but also created a mindset on how to look for opportunities to simplify and automate mechanical and manual tasks that are not only time consuming but prone to errors.

Python has become one of the most versatile programming languages in the industry, ranging from server administration to AI/ML, so the possibilities of this language are endless. The fact that Python is so widespread made it a great choice, because of its compatibility across different operating systems and platforms and given that it is an interpreted language, it makes it easier to use and port to different environments. I was familiar with the language but had little idea and experience on how to use it or how to build scripts, specially using APIs or plugins. Incorporating these into scripting has provided me with a wide range of tools that I can (and currently) use to improve my system administration and operational tasks in my current role. One recent example of utilising the acquired knowledge is based on the fact that I was able to create a Python tool to parse a two-column CSV file into a particular format for later processing by a telecommunications platform. This process has saved an important amount of time in the provisioning space and has been greatly appreciated internally.

Another aspect that has been particularly valuable during this class has been learning and getting familiar with verified sources and reputable documentation when investigating different topics in the Discussions board. Finding information in the Internet is relatively easy nowadays, but looking for respectable sources is a completely different challenge. Also I must mention that it has pushed me to do better investigation and improved my skills in presenting information, using citations in an industry accepted format as well as debating in a professional manner with other students in relation to newly learned topics.

Also, I would like to mention the utilisation of both Terraform and AWS while exploring the concept of IaC and Cloud providers. The link between both tools has shown me the potential and the relationship between software coding and infrastructure administration in the cloud, being an internal private virtual environment or an external cloud platform. The fact that the relationship between these two aspects is so close and linked together has been eye opening as I was completely unfamiliar with how versatile and powerful both aspects can be.

As a final thought, I can say that I clearly see now that we have been going little by little, putting the building blocks in a solid foundation to understand the possibilities that a programming language (Python in this case, but not only limited to it) can provide in administering infrastructure, either from a day-to-day perspective or in architecture or design projects, and these tools are going to be very important for future skill development in my career.